

DEPARTMENT: PUBLIC WORKS - ENGINEERING
CLASSIFICATION: COMPETITIVE
APPROVED: OCTOBER 31, 2016

SENIOR CIVIL ENGINEER

DISTINGUISHING FEATURES OF THE CLASS: The work involves responsibility for performing advanced professional engineering work in rendering opinions and decisions on technical aspects of a wide variety of subjects. The incumbent will make field surveys to investigate and evaluate various engineering projects; designs and prepares bid documents for highway and bridge projects; and performs structural analysis of county buildings and bridges. Work is performed under the general direction of a higher level administrative employee. Supervision may be exercised over a number of engineering and/or technical personnel. Does related work as required.

TYPICAL WORK ACTIVITIES:

1. Reviews and makes comments on specific engineering studies, planned alterations and construction for structural safety and design;
2. Directs and investigates planning and layout of various engineering projects, including the preparation of construction plans, profiles, specifications and estimates for bidding and purchase;
3. Coordinates engineering studies with federal, state and other agencies;
4. Assists in developing policy on research and engineering for the department;
5. Interprets federal guidelines and requirements as related to transportation projects to confirm procedures and information necessary to satisfy federal agencies;
6. Interprets the procedures for locally administered federal aid projects;
7. Makes field surveys to collect data and make evaluations;
8. Prepares costs estimates for construction projects;
9. Directs the inspection of major construction projects;
10. Supervises the preparation of right-of-way acquisition maps;
11. Supervises the design, including computer designing, of highway bridge projects;
12. Provides supervision and computer design training to assigned staff members;
13. Assigns and supervises field and office work of subordinates;
14. Prepares and submits DEC and USACOE permit applications;
15. Prepares Environmental Impact Statements relative to projects and deals directly with environmental agency professional staff on permit requirements;
16. Serves as liaison with outside engineers, architects, etc. for the county;
17. Performs and reviews hydrologic studies for bridge and culvert designs;
18. Evaluates bi-annual bridge inspection reports;
19. Updates and manages the county bridge maintenance strategy;
20. Prepares Initial Project Proposal (IPP) documents for federally funded transportation projects.

FULL PERFORMANCE KNOWLEDGES, SKILLS, ABILITIES AND PERSONAL CHARACTERISTICS: Comprehensive knowledge of engineering field techniques; thorough knowledge of principles, techniques and terminology of civil and structural engineering including bridge analysis and/or design; thorough knowledge of drafting techniques, terminology and equipment; thorough knowledge of principles of physics and mathematics as applied to civil and structural engineering including bridge analysis and/or design; thorough knowledge of techniques and sources of information concerning engineering research and economics; working knowledge of computer applications in the design and analysis of civil and structural engineering projects including bridge analysis and/or design; ability to perform complex technical engineering computations rapidly and accurately; ability to perform complex engineering studies and to prepare detailed, analytical reports; ability to prepare detailed cost estimates, drawings and specifications; ability to plan and supervise the work of a professional engineering staff; ability to get along well with others; sound professional judgment; initiative and resourcefulness; industry and dependability; physical condition commensurate with the demands of the position.

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MINIMUM QUALIFICATIONS:

Graduation from a regionally accredited college or university or one accredited by the New York State Board of Regents to grant degrees with a Bachelor's Degree in Civil Engineering, and five (5) years of full-time paid civil structural engineering experience including bridge analysis and/or design, at least one (1) of which must have been in a supervisory capacity; **OR**

Graduation from high school or possession of an equivalency diploma, and nine (9) years of full-time paid civil structural engineering experience including bridge analysis and/or design, at least one (1) year of which must have been in a supervisory capacity.

SPECIAL REQUIREMENT: Possession of a license to practice as a Professional Engineer in New York State at the time of appointment and for the duration of employment.

NOTE: A Master's Degree in Civil Engineering may be substituted for one (1) year of the required civil structural engineering experience, but may not be substituted for the required supervisory experience.